HIV / AIDS
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HIV/AIDS

HIV Disease

HIV disease is the result of infection with human immunodeficiency virus (HIV), which is primarily transmitted through sexual contact, and through sharing needles and other drug paraphernalia by injecting drug users. HIV infection results in progressive deterioration of the immune system, a process that generally takes place over a period of years. During the early years of HIV disease, the infected person is usually asymptomatic. However, as damage to the immune system continues, the individual typically begins to experience non-specific signs/symptoms of illness and then, in the later stages of the disease when immune system dysfunction becomes severe, the person becomes at risk for serious opportunistic infections and malignancies. It is in the later stages of HIV disease that the individual comes to meet the case definition for AIDS.

Etiologic Agent: Human immunodeficiency virus (HIV), a retrovirus, whose genetic material becomes incorporated into the genetic material of certain cells of the infected host, resulting in life-long infection.

Mode of Transmission: HIV is primarily spread through sexual contact with an infected person, and through sharing needles and/or other drug paraphernalia with someone who is infected. Babies born to HIV-infected women may become infected before or during birth, or through breast-feeding after birth. Health care workers can become infected through percutaneous, mucous membrane, or non-intact skin exposures to blood from an HIV-infected patient. HIV can also be transmitted through transfusions of contaminated blood or blood clotting factors, although this is now an extremely rare occurrence.

> Human immunodeficiency virus has been isolated from blood (including lymphocytes, macrophages, and plasma) and from other body fluids, such as cerebrospinal fluid, pleural fluid, human milk, semen, cervical secretions, saliva, urine, and tears. Only blood, semen, cervical secretions, and human milk, however, have been implicated epidemiologically in transmission of infection. The established modes of HIV transmission in the United States are the following: (1) sexual contact (homosexual and heterosexual), (2) percutaneous (from needles or other sharp instruments) or mucous membrane exposure to contaminated blood or other body fluids with high titers of HIV, (3) mother-to-infant (i.e., vertical) transmission before or around the time of birth, and (4) breastfeeding. Transfusion of

> blood, blood components, or clotting factor concentrates is now rarely a mode of HIV transmission in the United States because of exclusion of infected donors, viral inactivation treatment of clotting factor concentrates, and the availability of recombinant clotting factors. . . . . In the absence of documented parenteral, mucous membrane, or skin contact with blood or blood-containing body fluids, transmission of HIV rarely has been demonstrated to occur in families or households or with routine care in hospitals or clinics. Transmission of HIV has not been demonstrated to occur in schools or child care settings. . . . . A few cases of HIV infection in children have resulted from sexual abuse by an HIV-seropositive person. (*2000 Red Book*, p.330-1) Infections that. . . . . can be asymptomatic for long periods after vertical transmission (e.g. . . . . .HIV infection. . .) are more problematic [in terms of assessing the likelihood of sexual abuse]. The possibility of vertical transmission should be considered in these cases, but an evaluation of the patient's circumstances by the local child protective services agency is warranted in most. (*2000 Red Book*, p.143)

Incubation: In the absence of antiretroviral treatment, the median time between infection with HIV and the development of AIDS among adults is approximately 10 years.

Clinical Features: Within several weeks after infection, many persons develop an acute flu-like illness lasting for approximately two weeks. Most individuals then remain symptom-free for long periods (several years), but viral replication is ongoing during this time. As the immune system becomes increasingly damaged, individuals typically begin to develop non-specific symptoms/signs such as anorexia, lymphadenopathy, chronic diarrhea, weight loss, fever and fatigue. In advanced stages of the disease, persons become increasingly susceptible to life-threatening opportunistic infections and malignancies. See figure 3 on page 3.

Complications: Infection with HIV generally results in progressive damage to the immune system. This damage eventually becomes so severe that the individual develops serious opportunistic infections and malignancies, which can result in death.

Diagnosis: HIV infection in adults, adolescents, and children >18 months of age is generally diagnosed with an HIV antibody test.

Serologic diagnosis of HIV infection in the perinatally-exposed infant <18 months of age is complicated by passive transfer of maternal antibody across the placenta; this antibody can persist in the child for up to 18 months. Consequently, perinatally-exposed infants are usually diagnosed using viral diagnostic assays such as polymerase chain reaction (PCR) or HIV culture.

Treatment:

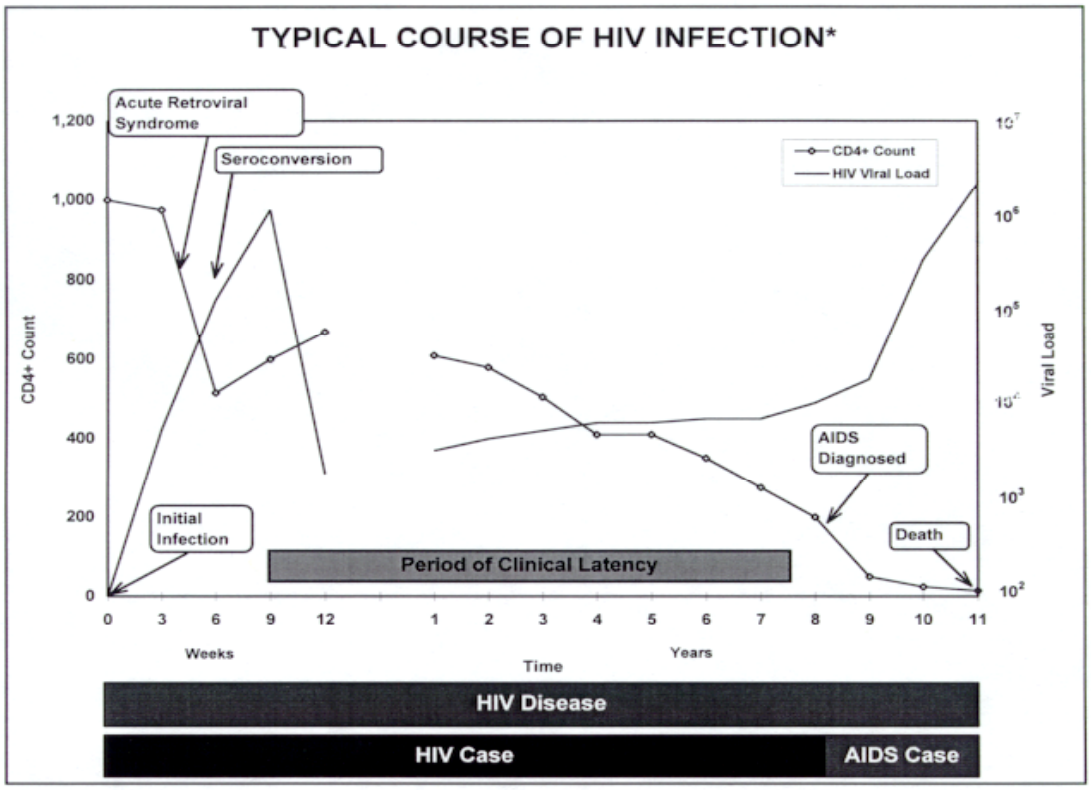
A number of antiretroviral drugs are now available for the treatment of HIV infection. These drugs, while not eliminating the infection, can decrease the amount of virus in the blood and slow the progression of the disease. Because HIV can become resistant to any of these drugs, combination treatment is now routinely used. It is vitally important that all antiretroviral medication be taken exactly as prescribed, and that doses are not missed.

The currently recommended drug combinations are not easy to take because of the large number of pills that must be taken at multiple specified times, and because of side effects associated with the medications. In addition, while the drugs provide significant benefit for many HIV-infected persons, they are not effective in all infected individuals. Also, persons who initially respond to combination therapy may subsequently develop resistance to their drug regimens.

Persons in the later stages of HIV disease are also routinely given antimicrobial medications to reduce the risk of developing certain opportunistic infections.

Disease Intervention of Sex Partners:

Sex and needle-sharing partners of HIV-infected persons should be notified of their exposure as soon as possible after they are identified to offer testing, promote life-style changes and prevent the spread of the virus (which is generally done by the Disease Intervention Specialists, Section 1.0). Exposed contacts testing HIV-negative but in the window period should be re-tested until six months after the time of last exposure.



*This figure shows the "typical" course of HIV disease. It may not reflect the disease course in a particular person, given the wide range of individual variation which exists. In addition, this figure was developed prior to the use of the newer combination antiretroviral therapies. The use of these therapies can change the appearance of the figure (for example, by increasing the period of clinical latency, or by increasing the period from AIDS diagnosis to death).

Associated Clinical Manifestations of HIV Disease and the CD4+ Count Range* at Which They Tend to Appear:

CD4+ >500	Persistent Generalized Lymphadenopathy Recurrent Vaginal Candidiasis	**CD4+ <200**	*P. carinii* Pneumonia Disseminated Histoplasmosis Miliary/Extrapulmonary TB Progressive Multifocal Leuko-encephalopathy (PML) HIV-Associated Dementia Wasting Peripheral Neuropathy Non-Hodgkins Lymphoma Cardiomyopathy
CD4+ 200-500	Pneumococcal and Other Bacterial Pneumonia Pulmonary TB Herpes Zoster Oropharyngeal Candidiasis (Thrush) Cryptosporidiosis, Self-Limited Kaposi's Sarcoma Oral Hairy Leukoplakia Cervical Intraepithelial Neoplasia Cervical Cancer Anemia B-Cell and Hodgkin's Lymphoma Idiopathic Thrombocytopenic Purpura Lymphocytic Interstitial Pneumonitis	**CD4+ <100**	Disseminated Herpes Simplex Toxoplasmosis Cryptococcosis Cryptosporidiosis, Chronic Microsporidiosis Candidal Esophagitis
		CD4+ <50	Disseminated Cytomegalovirus (CMV) Disseminated Mycobacterium avium Complex Central Nervous System (CNS) Lymphoma

*Most complications occur with increased frequency at lower CD4 counts.

Bartlett JG, Gallant JE. *2001-2002 Medical Management of HIV Infection*. Published by Johns Hopkins University, Department of Infectious Diseases, 2001. http://www.hopkins-aids.edu/publications/book/book_toc.html

HIV Disease Websites

DHSS Disease Directory: HIV/AIDS
http://www.dhss.state.mo.us/GLRequest/ID/HIVAIDS.html

CDC Division of HIV/AIDS Prevention
http://www.cdc.gov/hiv/dhap.htm

HIV/AIDS Treatment Information Service (ATIS)
http://www.aidsinfo.nih.gov/

NIAID. AIDS.
http://www.niaid.nih.gov/publications/aids.htm

Medical Management of HIV Infection
http://www.hopkins-aids.edu/publications/book/book_toc.html

HIV InSite Knowledge Base
http://hivinsite.ucsf.edu/InSite.jsp?page=KB

CDC. STD Facts & Information: HIV/AIDS & STDs
http://www.cdc.gov/nchstp/dstd/disease_info.htm#HIV&STDs

National Library of Medicine HIV/AIDS Information
http://sis.nlm.nih.gov/HIV/HIVMain.html

National Prevention Information Network (NPIN) HIV/AIDS Resources
http://www.cdcnpin.org

HRSA HIV/AIDS Services
http://hab.hrsa.gov/

MMWRs on HIV/AIDS
http://www.cdc.gov/hiv/pubs/mmwr.htm

FDA. Licensed / Approved HIV, HTLV and Hepatitis Tests
http://www.fda.gov/cber/products/testkits.htm

Laboratory Tests for HIV in Adults

HIV infection in adults, adolescents, and children >18 months of age is usually diagnosed by using HIV-1 antibody tests. Antibody testing begins with a sensitive screening test such as the enzyme immunoassay (EIA, or ELISA). Reactive screening tests must be confirmed by a supplemental test, such as the Western blot (WB) or an immunofluorescence assay (IFA). If confirmed by a supplemental test, a positive antibody test result indicates that a person is infected with HIV and is capable of transmitting the virus to others. Elisa and Western Blot testing may be performed on either blood or oral fluids. However, oral testing is not recommended for individuals under 13 years of age.

Two major HIV types have been characterized in humans: HIV-1, which causes nearly all cases of HIV infection in the U.S. and HIV-2, which appears to be an uncommon cause of infection in the U.S. Though HIV-2 infection can lead to AIDS, it takes longer to induce immunosuppression and AIDS, it is less transmissible, and it is associated with lower mortality than HIV-1 infection. A person infected with HIV-2 may not be detected with an HIV-1 antibody test. Because the prevalence of HIV-2 in the U.S. is extremely low, CDC does not recommend routine testing for HIV-2 in settings other than blood centers, unless demographic or behavioral information indicates that HIV-2 infection might be present. Those at risk for HIV-2 infection include persons from a country in which HIV-2 is endemic or their partners. HIV-2 is endemic in parts of West Africa, and an increased prevalence of HIV-2 has been reported in Angola, France, Mozambique, and Portugal. In addition, testing for HIV-2 should be conducted when there is clinical evidence or suspicion of HIV disease in the absence of a positive test for antibodies to HIV-1.

Information on CD4+ tests and viral load measurements in adolescents and adults can be found in "Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents". Similar information for children can be found in “Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection”. Both of these documents are periodically updated and are available on the HIV/AIDS Treatment Information Service (ATIS) web site (http://www.hivatis.org/trtgdlns.html). A discussion of the different tests used in the detection/management of HIV disease is found in: Bartlett JG, Gallant JE. *2000-2002 Medical Management of HIV Infection*. Published by Johns Hopkins University, Department of Infectious Diseases, 2001. (http://www.hopkins-aids.edu/publications/book/ch2-main.html.)

Recently, the FDA has approved use of a rapid test to diagnose HIV. At time of publication of this document, Missouri Department of Health and Senior Services is in the process of updating a rule to allow use of this test. Information on rapid testing can be found at www.orasure.com.

Laboratory Tests for HIV in Children

1. Less than 18 months of age

Infants born to HIV-infected mothers (HIV-exposed infants) present special diagnostic problems. Positive HIV antibody tests in children up to 18 months of age born to HIV-infected mothers are not necessarily diagnostic of infection, because the antibodies in the child may be due to passive transfer of maternal HIV antibody. Passively acquired HIV antibody falls to undetectable levels among most infants by 18 months of age. HIV infection can be definitely diagnosed in most infected infants by age one month and in virtually all infected infants by age six months by using viral diagnostic assays.

HIV infection can be definitively diagnosed in most infected infants by age one month and in virtually all infected infants by age six months by using viral diagnostic assays. A positive virologic test (i.e., detection of HIV by culture or DNR or RNA polymerase chain reaction [PCR]) indicates possible HIV infection and should be confirmed by a repeat virologic test on a second specimen as soon as possible after the results of the first test become available. Diagnostic testing should be performed before the infant is age 48 hours, at age one to two months, and at age three to six months. Testing at age 14 days also may be advantageous for early detection of infection. HIV-exposed infants should be evaluated by or in consultation with a specialist in HIV infection in pediatric patients.

HIV DNA PCR is the preferred virologic method for diagnosing HIV infection during infancy. A meta-analysis of published data from 271 infected children indicated that. . . . . 38% of infected children had positive PCR tests by age 48 hours. No substantial change in sensitivity during the first week of life was observed, but sensitivity increased rapidly during the second week, with 93% of infected children testing positive by PCR by age 14 days.

Assays that detect HIV RNA is plasma also may be useful for diagnosis of perinatal infection and may prove to be more sensitive than DNA PCR for early diagnosis of HIV infection in HIV-exposed infants. However, data are more limited regarding the sensitivity and specificity of HIV RNA assays compared with HIV DNA PCR for early diagnosis.

HIV culture has a sensitivity similar to that of DNA PCR for the diagnosis of infection. However, HIV culture is more complex and expensive to perform than DNA PCR, and definitive results may not be available for two to four weeks.

Although use of standard and immune-complex-dissociated p24 antigen tests are highly specific for HIV infection and have been used to diagnose infection in children, the sensitivity of these tests is less than the sensitivity of other HIV virologic tests. The use

of p24 antigen testing alone is not recommended to exclude infection or for diagnosis of infection in infants aged less than a month because of a high frequency of false-positive assays during this time.

Initial testing is recommended by age 48 hours because nearly 40% of infected infants can be identified at this time. Because of the concerns regarding potential contamination with maternal blood, blood samples from the umbilical cord should not be used for diagnostic evaluations.

Repeat diagnostic testing can be considered at age 14 days in infants with negative tests at birth, because the diagnostic sensitivity of virologic assays increases rapidly by age two weeks and early identification of infection would permit modification of antiretroviral therapy from the standard six-week course of neonatal ZDV chemoprophylaxis to more aggressive combination antiretroviral therapy. Infants with initially negative virologic tests should be re-tested at one to two months.

Although prophylactic antiretroviral therapy theoretically could affect the predictive value of HIV virologic testing in neonates, ZDV monotherapy did not delay the detection of HIV by culture in infants in PACTG protocol 076 and has not decreased the sensitivity and predictive values of many virologic assays. However, whether the current, more intensive combination antiretroviral regimens women may receive during pregnancy for treatment of their own HIV infection will affect diagnostic test sensitivity in their infants is unknown.

HIV-exposed children who have had repeatedly negative virologic assays at birth and age one to two months should be retested again at age three to six months.

HIV infection is diagnosed by two positive HIV virologic tests performed on separate blood samples. HIV infection can be reasonably excluded among children with two or more negative virologic tests, two of which are performed at age >1 month, and one of those being performed at age > 4 months. Two or more negative HIV immunoglobulin G (IgG) antibody tests performed at age >6 months with an interval of at least one month between the tests also can be used to reasonably exclude HIV infection among children with no clinical evidence of HIV infection. HIV infection can be definitively excluded if HIV IgG antibody is negative in the absence of hypogammaglobulinemia at age 18 months and if the child has both not clinical symptoms of HIV infection and negative HIV virologic assays.

Reference: Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection," August 2001. (http://www.aidsinfo.nih.gov/) These guidelines were developed by the Panel on Clinical Practices for Treatment of HIV Infection convened by the Department of Health and Human Services (DHHS) and the Henry J. Kaiser Family Foundation.

2. Greater than 18 months of age

If the child is over 18 months of age, testing for antibody to HIV using the standard ELISA test with a confirmatory test (usually Western blot) is sufficient for diagnosis of HIV infection.

Window Period

There is a period of time following initial infection with HIV when the individual's level of HIV antibody is too low to be detected by the antibody test. This period, called the "window period", will vary in different individuals, but has been said to average about four to six weeks. However, it has been estimated that, when the most recent HIV antibody tests are used, the average length of this window period is only about 25 days. By six months after the time of initial infection, most infected persons will have detectable levels of HIV antibody. Thus, although a negative antibody test result usually indicates that the person is not infected, antibody tests cannot exclude infection that occurred <6 months before the test.

Persons at highest risk of infection:

- test immediately, to establish baseline information
- test again at three and six months, respectively
- if negative results are obtained six months after the time of last exposure, it is unlikely that infection has occurred.

Persons at relatively low risk of infection:

- test three to six months after the last presumed exposure
- when patient anxiety is considerable, immediate testing followed by re-testing in three to six months may be appropriate.

Interpretation of Test Results

If an adult, adolescent, or child >18 months of age has a repeatedly reactive HIV EIA (ELISA) test followed by a positive confirmatory test (usually a Western blot), he or she is considered to be infected with HIV and capable of transmitting the virus to others.

Although a negative antibody test means that no antibodies were detected at the time of testing, it is possible that the person has been infected but has not yet produced detectable levels of antibody (See Subsection 6.4). Antibody tests cannot rule out infection that occurred <6 months before the test.

The current generation of HIV antibody tests is very accurate, having excellent sensitivity and specificity.

- ✓ The sensitivity of the test reflects its ability to detect any HIV antibody that may be present in the specimen being tested. Put another way, the sensitivity of the test indicates its ability to avoid false-negative results. With currently available HIV antibody tests, sensitivity is close to 100%.
- ✓ The specificity of the test reflects its ability to avoid false-positive results. A test which is highly specific will very rarely give a positive result on someone who is uninfected. The high specificity of the HIV antibody test is indicated by a study conducted by the U.S. Army, that found the test had a false-positive rate of one in 135,000. This is confirmed by a second study, performed on donated units of blood and monitored by CDC, which found that the test's specificity was at least 99.9994%.

On occasion, the results of the Western blot test are reported as equivocal (indeterminate). Potential causes of equivocal results include:

1) early stage HIV infection when the person is in the process of seroconverting;
2) advanced HIV infection with decreased antibody titers;
3) cross-reacting alloantibodies from pregnancy, blood transfusions, or organ transplantation
4) autoantibodies as seen with collagen-vascular diseases, autoimmune disease, and malignancy;
5) infection with HIV-2; and
6) receipt of an experimental HIV vaccine.

One approach to managing a patient with an equivocal (indeterminate) Western blot test is the following:

Most authorities suggest that persons with indeterminate results should be retested. If at all possible, the retesting of an individual at a later time should be performed in parallel

with re-assay of the initial sample on the same run with the same kit lot number and the same assay conditions to ensure that the samples can be directly compared. The World Health Organization (WHO) recommends retesting persons after two weeks if highly suggestive Western blot profiles are produced, although other organizations suggest waiting one to six months before retesting. If an individual is re-tested over a period of six months and becomes negative or the band profiles do not progress, infection with HIV can generally be ruled out. For poorly understood reasons, many individuals continue to exhibit indeterminate results for years but are not infected. If an individual does progress serologically (more bands, or greater intensity of bands) or converts to positive (sero-conversion) during retesting, the individual was probably infected at the time of the first test (early infection). It should be noted that individuals who have received vaccination for HIV (e.g., subunit gp160), may be misidentified as positive based on reactions to the envelope antigens alone.

The significance of an indeterminate Western blot result varies depending on the risk factors, clinical status of the patient, and the Western blot profile produced. For example, individuals with a history of high-risk behavior are more likely to be the ones who later sero-convert, because the chances of their being infected are high. In addition, some Western blot profiles are more suggestive of early infection (e.g., p24, p31, and p55) than are others (eg., p17 only). Many initially indeterminate results that subsequently become negative or remain indeterminate are probably a result of non-specific reactions, hypergammaglobulinemia, the presence of cross-reactive antibodies, infection by HIV-2, or infection by an unknown, but related retrovirus. Also, it is known that some individuals with AIDS may lose reactivity to p24, and perhaps other antibodies, later in disease, so that even AIDS patients may have indeterminate Western blot results by some criteria.

Ancillary tests, such as PCR and viral culture, may be helpful in resolving indeterminate results if the diagnosis is in question.

(Constantine, N. HIV Antibody Testing: Methodology, in Cohen PT, Sande MA, Volberding PA [eds.]. *The AIDS Knowledge Base [3rd Ed.];* 1998)

Pre-Test Counseling

HIV counseling is considered to be an important HIV-prevention strategy. By ensuring that counseling is empathic and "client-centered", clinicians will be able to develop an accurate assessment of the person's risk and help him or her to develop a specific and realistic HIV-prevention plan.

Genuine, non-judgmental concern for the patient creates an atmosphere conducive to open communication. Open-ended questions yield maximum information. Allow the patient to ask questions and to express feelings.

Patients should be encouraged to initiate risk-reduction behaviors while waiting for test results, behaving as if they are sero-positive to prevent HIV transmission during this time period. An appointment should be made for a return visit to receive posttest counseling and test results. **HIV test results are generally not to be given over the telephone and never by mail.**

For additional counseling guidelines, refer to CDC Guidelines for HIV Counseling, Testing, and Referral in the appendix or at http://www.cdc.gov/mmwr/PDF/rr/rr5019.pdf.

Informed Consent

Informed consent should be obtained before conducting an HIV test. Patients should be given an opportunity to ask questions or express concerns they may have. Persons must be informed of state reporting laws as part of the informed consent process.

Summary of Prevention Counseling Procedures:

- Provide HIV education (virus that damages the immune system, transmission, etc.)
- Conduct risk assessment, including sex and drug use history
- Counsel about risk reduction
- Provide information about the test (explain positive/negative results)
- Obtain informed consent
- Referral to medical, psychosocial and/or drug/alcohol intervention services

An HIV Risk Assessment/Consent form can be found in this subsection.

19 CSR 20-26.030 contains regulations for persons (except physicians and their "delegated representatives") providing HIV counseling and testing. These regulations state that "informed consent shall be obtained from the person prior to HIV testing, unless otherwise permitted by law."

Physicians (and their "delegated representatives") who perform HIV testing are regulated under 19 CSR 20-26.040, which does not mention informed consent, but states that the physician must "consult" with the patient prior to testing.

19 CSR 20-26.030 and 19 CSR 20-26.040 are available at:
http://www.sos.mo.gov/adrules/csr/current/19csr/19c20-26.pdf

Overview of HIV Testing Procedures

For clients who request HIV testing, the following format is recommended:

A. Pretest
   1. Conduct a risk assessment
      a. What brought the client in for testing?
      b. What high risk behaviors are identified?
   2. Facilitate prevention counseling, questions answered
   3. Develop Risk Reduction Plan with client
   4. Obtain signed, witnessed informed consent
   5. Provide appropriate brochures

B. Obtain Sample

C. Giving Negative Results
   1. Give test results, answer questions
      a. Give test results. Does client feel he/she is at risk? When? What activities or situations have they been involved in which makes them feel they are placed at greatest risk?
   2. Discuss client's alternatives to past behavior
   3. Renegotiate individualized risk reduction plan with client
   4. Initiate other community referrals, as indicated
   5. Schedule retest, if requested by client
   6. Give negative brochure

D. Giving Positive Results
   1. Call your local Disease Intervention Program and they will assist you in this process (Appendix C).
   2. Complete the Confidential HIV Report (blue card provided if the State Public Health Laboratory is used) and return to the Office of Surveillance.
   3. Disease Intervention Program staff will provide post-test counseling and partner elicitation to the positive client.
   4. Disease Intervention Program staff will assure referrals are made into HIV care/prevention follow up services.

Management of Sex/Needle-Sharing Partners

When referring to persons who are infected with HIV, the term "partner" includes not only sex partners but also injecting-drug users who share syringes or other injecting equipment. The rationale for partner notification is that the early diagnosis and treatment of HIV infection possibly reduces morbidity and provides the opportunity to encourage risk-reducing behaviors. Partner notification for HIV infection must be confidential and will depend on voluntary cooperation of the patient.

Two complementary notification processes, patient referral and provider referral, can be used to identify partners. With patient referral, patients directly inform their partners of their exposure to HIV infection. With provider referral, trained health department personnel locate partners on the basis of the names, descriptions, and addresses provided by the patient. During the notification process, the anonymity of patients is protected; their names are not revealed to partners who are notified. Many state health departments provide assistance, if requested, with provider-referral partner notification.

The results of one randomized trial suggested that provider referral is more effective in notifying partners than patient referral. In that study, 50% of partners in the provider-referral group were notified, compared with 7% of partners notified by persons in the patient-referral group. However, whether behavioral change takes place as a result of partner notification has not been determined. Many patients state they are reluctant to disclose the names of partners due to concerns about discrimination, disruption of relationships, loss of confidentiality for the partners, and possible violence.

The following are specific recommendations for implementing partner-notification procedures:

- HIV-infected patients should be encouraged to notify their partners and to refer them for counseling and testing. If requested by the patient, health-care providers should assist in this process, either directly or by referral to health department partner-notification programs.
- If patients are unwilling to notify their partners, or if they cannot ensure that their partners will seek counseling, physicians or health department personnel should use confidential procedures to notify the partners.

Case Management

The Missouri Department of Health and Senior Services (MDHSS), through the HIV/AIDS Case Management Program, provides assistance in locating and coordinating medical and psychosocial services for individuals with HIV or AIDS. The Disease Intervention Programs notify providers of this program for their patients when calling for clarification of partner notification. When the Disease Intervention Programs interview/counsel patients, information regarding this program is provided to HIV-infected individuals.

The program is available statewide, free of charge, regardless of the insurance or financial status of the individual with HIV or AIDS. Case Managers are located in a variety of settings, including local health departments and community-based organizations (See Appendix C for listing.)

Individuals may contact a case management office or may be referred, with their permission, by physicians, family, friends or volunteer organizations. Upon referral, a case manager will make arrangements to meet with the individual. Meetings may occur in the individual's home, doctor's office, clinic, hospital, case manager's office or other setting. The individual will be given information about HIV/AIDS, disease transmission and methods to maintain a healthy lifestyle. The individual may choose to enroll as a client in the program. The client will work with the case manager to complete an evaluation/assessment and develop a service plan. The client is always an equal partner with the case manager in the overall planning, the decision making and the implementation of the service plan. The case manager will assist the client in locating and accessing services such as medical care, housing, counseling, transportation, etc. as needed. The client will meet with the case manager on a regular basis to re-evaluate and update the service plan. Information regarding the eligibility criteria for services is available from the case manager.

HIV in Pregnancy

Increased understanding of the mechanisms of perinatal transmission of HIV and the discovery of an effective therapeutic intervention have provided the opportunity to significantly reduce the occurrence of mother-to-infant transmission. The results from the AIDS Clinical Trials Group (ACTG) 076 study indicated that administration of zidovudine (ZDV, AZT) to a selected group of pregnant women infected with HIV and to their newborns reduced the risk for perinatal HIV transmission by approximately two-thirds (from approximately 26% to 8%).

> Incorporation of this regimen into clinical practice, coupled with increased prenatal HIV-1 counseling and testing, resulted in falling perinatal transmission rates to as low as 4-6%. Transmission rates of 2% or less have been reported when zidovudine is combined with elective caesarean delivery or when women are treated with combination antiretroviral regimens that reduce maternal viral load to unquantifiable levels. (Mofenson LM, McIntyre JA. Advances and research directions in the prevention of mother-to-child HIV-1 transmission. *Lancet* 2000; 355:2237-44.)

With the availability of specific therapy to significantly reduce perinatal transmission risk, it is very important for all pregnant women to receive appropriate prenatal care and be offered the opportunity to know their HIV infection status.

In 1996, the Missouri Department of Health developed a policy to reduce the risk of perinatal HIV transmission (http://www.dhss.state.mo.us/MoEpi/moepi182.pdf). This policy includes the following recommendations:

> Prenatal care should routinely include HIV education and counseling and each pregnant woman should be encouraged to undergo voluntary HIV testing. Each HIV-infected pregnant woman should be informed of the substantial benefit and potential risks of antiretroviral therapy administered during pregnancy and the neonatal period.
>
> If a woman has not been tested for HIV during the prenatal period, she should, at the time she presents for delivery, receive counseling and be encouraged to undergo HIV testing. If a woman chooses not to be tested for HIV, she should be informed of the significant benefits to her child's health of knowing her child's infection status, and she should be encouraged to allow the child to be tested. It should be ensured that the mother provides consent with the understanding that a positive HIV test for her child is indicative of infection in herself.
>
> HIV-infected mothers should be advised against breastfeeding in order to reduce the risk for HIV transmission.

Before an HIV-infected woman and her infant leave the hospital, arrangements should be made for appropriate, ongoing medical care and other necessary services for both individuals. If an HIV-infected woman is not enrolled in Case Management, she should be encouraged to accept a referral to this program.

"Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection," August 8, 2001 (http://www.aidsinfo.nih.gov/guidelines/default_db2.asp?id=51), state that identification of HIV-infected women before or during pregnancy is critical to providing optimal therapy for both infected women and their children and to preventing perinatal transmission. Therefore, prenatal HIV counseling and testing with consent should be the standard of care for all pregnant women in the United States.

The American Academy of Pediatrics and the American College of Obstetricians and Gynecologists recommend that all pregnant women should receive HIV education and counseling as part of their regular prenatal care. They further recommend HIV testing in all pregnant women with their consent. In the event of refusal of testing, this should be documented. For newborns whose mother's HIV status was not determined during pregnancy, the infant's health care provider should educate the parent(s) concerning HIV testing and recommend HIV testing for the newborn. (http://www.aap.org/advocacy/washing/hivtest.htm)

The CDC Revised Guidelines for HIV Counseling, Testing, and Referral and Revised Recommendations for HIV Screening of Pregnant Women can be found in the appendix and online at: http://www.cdc.gov/mmwr/PDF/rr/rr5019.pdf.

Treatment/Prophylaxis

Treatment recommendations for HIV disease are highly complex and continually changing as results of clinical trials become known and as new therapeutic agents become available. Refer to the current treatment guidelines (which are periodically updated) published on the HIV/AIDS Treatment Information Service (ATIS) web site (http://www.aidsinfo.nih.gov/)

MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
SECTION OF STD/HIV

HIV RISK ASSESSMENT/CONSENT

CLIENT ID/LAB NUMBER

NAME	TELEPHONE NUMBER	DATE OF VISIT
ADDRESS	ZIP CODE	COUNTY

DATE OF BIRTH	AGE	☐ Male ☐ Female	☐ M ☐ S ☐ D ☐ W ☐ Sep ☐ SO ☐ Live-in

Race: ☐ W ☐ B ☐ H ☐ API ☐ NA ☐ Other _____

Date of last sex? _____

Date of last needle-sharing? _____

Test History

Have you been tested before?
NO _____
YES _____
Times: _____

Current Test Results:
_____

Last Test
Where? _____
When? _____
Results
Negative _____
Positive _____
Equivocal _____
Unknown _____

How many sex partners in the last six months?
_____

How many needle-sharing partners in the last six months?
_____

Pregnant? ☐ Yes ☐ No ☐ Unknown

SEXUAL BEHAVIOR

Counselor: Enter date of last time

_____ Sex with male
Oral Perform _____ Receive _____
Anal Insert _____ Receive _____
Vag Insert
_____ Sex with female
Oral Perform _____ Receive _____
Anal Insert _____ Receive _____
Vag Insert _____ Receive _____
_____ Sex with HIV + partner
_____ Sex with injecting drug user
_____ Exchange of sex for money, drugs, etc.
_____ Victim of sexual assault/abuse

DRUG USE HISTORY / DATES

Counselor: Enter date of last time

_____ Injected drugs
_____ Shared needles
_____ Sex with drug or alcohol use
_____ Other drug use

BARRIER / CONDOM USAGE

☐ Always
☐ Sometimes
☐ Rarely/Never

ADDITIONAL EXPOSURE

_____ Occupational exposure
_____ Tattoo/body piercing
_____ Neonatal/mother of HIV +
_____ Other

COMMUNICABLE DISEASE / DATES

Counselor: Enter date of last time

_____ Syphilis – RPR given _____
_____ Gonorrhea
_____ Chlamydia
_____ Herpes
_____ TB/+ PPD
_____ Hepatitis type _____
_____ Other _____

CONSENT FOR THE HIV ANTIBODY TEST

By my signature on this form, I understand and give permission to be tested for evidence of HIV. If found to be HIV infected, I am aware that positive results are reported to the Missouri Department of Health, and that I will be offered case management services.

SIGNATURE OF CLIENT	DATE
SIGNATURE OF COUNSELOR	AGENCY
SITE OF TEST (IF AN OUTREACH TEST)	AGENCY

Risk Reduction Plan

Test Results to be given:	**When:**	**Where?**

Referrals:

Post Test Session Date: _____	**Recommend Retest: Date:** _____	**Counselor:** _____

HIV Antibody Test Request (Lab-45, MO 580-0907)

The state laboratory performs HIV testing (Elisa and Western Blot). Specimens must be submitted in the test kits which are provided by the state laboratory and will not be processed unless submitted according to state laboratory directions. Test kits are available by phoning 573/751-4830.

FOR STATE LAB USE

869787
869787
869787
869787

SUBMITTER:

1. TEAR OFF AND KEEP COPY #1 FOR YOUR RECORDS.
2. PLACE A PRENUMBERED PEEL-OFF LABEL ON THE SPECIMEN TUBE. TWO (2) PRENUMBERED PEEL-OFF LABELS ARE FOR YOUR USE.

PLEASE LEAVE 1 PRENUMBERED PEEL-OFF LABEL FOR STATE LAB USE.

SPECIMEN WILL NOT BE TESTED UNLESS BOTH BOX A AND B ARE COMPLETED AS REQUESTED.

HIV ANTIBODY TEST REQUEST

LAB-45 (RB-93)
MO 580-0907 (8-93)

PATIENT ID NUMBER: 869787

DATE DRAWN

PATIENT NAME (OPTIONAL)

DATE OF BIRTH

SEX [M] [F]

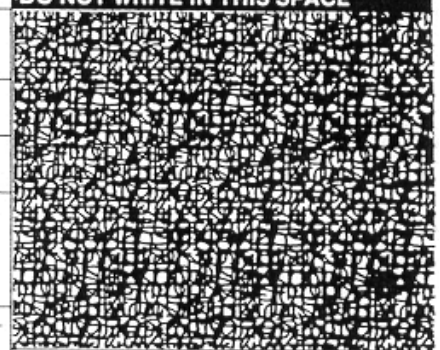
BOX A: ATTENDING PHYSICIAN'S NAME AND ADDRESS

PHONE ▸ COUNTY ▸

BOX B: NAME AND ADDRESS OF SUBMITTER. LAB RESULTS WILL BE SENT TO THE SUBMITTER ONLY.
THIS IS YOUR RETURN ADDRESS LABEL.

MISSOURI DEPARTMENT OF HEALTH
STATE PUBLIC HEALTH LABORATORY
307 W. McCARTY STREET
JEFFERSON CITY, MO 65101

DO NOT WRITE IN THIS SPACE



PROVIDER CODE

RACE [WH] [IND] [ASIA] [BLK] [HISP] [OTHER]

EOAA EMPLOYER
services provided on a non-discriminatory basis

SUBMITTER FILE

PHYSICIAN'S CONFIDENTIAL REPORT OF HIV INFECTION

PATIENT INFORMATION

1. PATIENT ID NUMBER *(FROM LAB SLIP)*

2. PATIENT NAME *(LAST, FIRST, MI)*

3. ADDRESS *(STREET, APT. #, P.O. BOX NO.)*

CITY, STATE, ZIP CODE

COUNTY

4. TELEPHONE ( )

5. SS #

6. DCN #

7. DATE OF BIRTH

8. AGE

9. MARITAL STATUS [S] [M] [D] [W]

10. SEX [M] [F]

11. RACE
☐ White ☐ Black ☐ Asian/Pacific Is. ☐ Am. Indian/AK Native ☐ Other:

12. Hispanic Ethnicity ☐ Yes ☐ No

13. VITAL STATUS ☐ Living ☐ Deceased – Date of Death: ___ / ___ / ___

14. COUNTRY OF BIRTH ☐ U.S. ☐ Other: ☐ Unknown

17. FOR ADULT FEMALES Hepatitis B: HBsAg ☐ Pos ☐ Neg

[Y] [N] Patient is Currently Pregnant EDC: ___ / ___ / ___

If Yes, Week of Pregnancy Antiretroviral Therapy Began: ___

☐ ZDV (AZT) ☐ Other: ___

PATIENT HISTORY

15. AFTER 1977, THIS PATIENT HAD: *(CHECK ALL THAT APPLY)*

Y	N	
☐	☐	Sex With Male
☐	☐	Sex With Female
☐	☐	Injected Non-Prescription Drugs
☐	☐	Received Clotting Factor ☐ VIII ☐ IX ☐ Other:
☐	☐	Blood Transfusion: First ___ / ___ Last ___ / ___
☐	☐	Worked In Health Care Setting: Occupation:
☐	☐	Recipient Of Tissue/Organs/Artificial Insemination Date: ___ / ___

HETEROSEXUAL RELATIONS WITH:

☐	☐	Injection Drug User
☐	☐	Bisexual Male
☐	☐	Person With Hemophilia/Coagulation Disorder
☐	☐	Transfusion/Transplant Recipient With Documented HIV Infection
☐	☐	Person With AIDS/HIV Infection Whose Risk Is Not Known

16. FOR PEDIATRIC/PERINATAL CASES

[Y] [N] IF < 13 YEARS OF AGE, MOTHER WITH HIV/AIDS?

If Yes, Mother's Name: ___ Mother's DOB: ___ / ___ / ___

If Newborn, Date Anti-Retroviral Therapy for HIV Prevention Began: ___ / ___ / ___

Number of Live-Born Infants Delivered in the Last 18 Months: ___

Provide Birth Information for Most Recent Birth(s):

DOB: ___/___/___ Birth Hospital: ___ Breastfed [Y] [N]

DOB: ___/___/___ Birth Hospital: ___ Breastfed [Y] [N]

MO 580-1641 (7-00) *(CONTINUED)* SHP-22

LABORATORY DATA

18. CURRENT HIV TEST(S)

HIV Antibody Tests:	Pos	Neg	Incon-clusive	Not Done	TEST DATE MM/DD/YY
HIV-1 EIA	☐	☐	☐	☐	___/___/___
HIV-1 Western Blot/IFA	☐	☐	☐	☐	___/___/___
HIV-1/HIV-2 Combination EIA	☐	☐	☐	☐	___/___/___
Other: ___	☐	☐	☐	☐	___/___/___

HIV Antibody Test Specimen Was:
☐ Serum ☐ Oral Fluid ☐ Urine ☐ Other: ___

HIV Detection Tests:	Pos	Neg	Incon-clusive	Not Done	TEST DATE MM/DD/YY
PCR, DNA or RNA Probe	☐	☐	☐	☐	___/___/___
Culture	☐	☐	☐	☐	___/___/___
Antigen Test	☐	☐	☐	☐	___/___/___
Other: ___	☐	☐	☐	☐	___/___/___

HIV VIRAL LOAD TESTING: (Record most recent testing) TEST DATE MM/DD/YY

☐ Detectable ☐ Non-Detectable ___/___/___

Test Type* Copies/ml

Type 11. NASBA (Organon) 12. RT-PCR (Roche) 13. bDNA (Chiron) 18. Other 19. Unspecified

19. TESTING LABORATORY NAME(S), ADDRESS(ES), TELEPHONE NUMBER(S):

20. If HIV TESTS ARE NOT DOCUMENTED, IS HIV DIAGNOSED BY A PHYSICIAN?

[Y] [N] If Yes, Diagnosis Date: ___ / ___

Provider: ___ City/State: ___

21. [Y] [N] Patient is Past or Present HIV Vaccine Trial Participant

22. PREVIOUS HIV TEST? [Y] [N] If Yes, Most Recent Result: [P] [N] [In]

Type of Test: ☐ Antibody ☐ Antigen ☐ PCR ☐ Culture
☐ Qualitative PCR ☐ Quantitative PCR (VL)
☐ Other (specify) ___ Test Date: ___/___/___

Provider: ___
City/State: ___

If Previously Tested, Reason for Retest:
☐ Case Management Eligibility ☐ Medicaid/Medicare Eligibility
☐ High Risk Negative ☐ Client Request
☐ Confirm Diagnosis ☐ Other: ___

23. CD4+ LYMPHOCYTE COUNT: TEST DATE MO/YR

Most Recent CD4+ Count . . . . [ ],[ ][ ][ ] cells/µL ___ / ___
CD4+ Percent . . . . . [ ][ ] % ___ / ___

First CD4+below 200µL or 14% [ ],[ ][ ][ ] cells/µL ___ / ___
(If Known) [ ][ ] % ___ / ___

MO 580-1641 (7-00) SHP-22

CLINICAL STATUS

24. [Y] [N] PATIENT MEDICALLY EVALUATED? **If Yes, Check All That Apply**

- ☐ Asymptomatic
- ☐ Symptomatic, No History of AIDS-Defining Illness
- ☐ CD4+ is now or has been <200/14%
- ☐ Symptomatic, AIDS-Defining Illness Diagnosed

	Def.	Pres.	Mo/Yr
• Candidiasis, bronchi, trachea, lungs	☐	☐	____/____
• Candidiasis, esophageal	☐	☐	____/____
• Carcinoma, invasive cervical	☐	☐	____/____
• Coccidioidomycosis, disseminated or extrapulmonary	☐	☐	____/____
• Cryptococcosis, extrapulmonary	☐	☐	____/____
• Cryptosporidiosis, chronic intestinal	☐	☐	____/____
• Cytomegalovirus disease (other than liver, spleen, or nodes)	☐	☐	____/____
• Cytomegalovirus retinitis (vision loss)	☐	☐	____/____
• HIV encephalopathy	☐	☐	____/____
• Herpes simplex: chronic ulcer(s); or bronchitis, pneumonitis, esophagitis	☐	☐	____/____
• Histoplasmosis, dissem. or extrapulm.	☐	☐	____/____
• Isosporiasis, chronic intestinal (>1 mo)	☐	☐	____/____
• Kaposi's sarcoma	☐	☐	____/____
• Lymphoma, Burkitt's (or equivalent)	☐	☐	____/____
• Lymphoma, immunoblastic (or equiv.)	☐	☐	____/____
• Lymphoma, primary in brain	☐	☐	____/____
• *M. avium* complex or *M. kansasii*, disseminated or extrapulmonary	☐	☐	____/____
• *M. tuberculosis*, pulmonary	☐	☐	____/____
• *M. tuberculosis*, dissem. or extrapulm.	☐	☐	____/____
• *Mycobacterium*, of other or unidentified species, dissem. or extrapulm.	☐	☐	____/____
• *Pneumocystis carinii* pneumonia	☐	☐	____/____
• Pneumonia, recurrent in 12 mo period	☐	☐	____/____
• Progressive multifocal leukoencephalopathy	☐	☐	____/____
• *Salmonella* septicemia, recurrent	☐	☐	____/____
• Toxoplasmosis of brain	☐	☐	____/____
• Wasting syndrome due to HIV	☐	☐	____/____
Pediatric: *(Additional Indicator Diseases)*			
• Bacterial infections, multiple or recurrent, (incl. *Salmonella* septicemia)	☐	☐	____/____
• Lymphoid interstitial pneumonia and/or pulmonary lymphoid hyperplasia	☐	☐	____/____

25. If AIDS, Facility of Diagnosis: _____

City/State: _____

☐ Public ☐ Private ☐ Federal

TYPE OF FACILITY WHERE AIDS WAS DIAGNOSED: *(Check One)*

☐ Hospital Inpatient ☐ Hospital Outpatient ☐ Public Clinic

☐ Physician's Office ☐ Other: _____

Def. = definitive diagnosis **Pres. = presumptive diagnosis** **Mo/Yr = date of initial diagnosis**

MO 580-1641 (7-00) *(CONTINUED ON BACK)* SHP-22

INTERVENTION/PREVENTION SERVICES

26. [Y] [N] Patient (or Parent/Guardian) Informed of HIV Infection Status
[Y] [N] Physician Has Performed Spousal Notification
[Y] [N] Physician Requests Partner Notification Assistance
[Y] [N] Physician Requests Support/Referral Information Services
[Y] [N] Patient is Receiving Treatment for HIV/AIDS
If Yes, ☐ Antiretroviral ☐ OI Prophylaxis

27. **PATIENT'S MEDICAL TREATMENT PRIMARILY REIMBURSED BY:**

- ☐ Private Insurance, HMO
- ☐ Private Insurance, Non HMO
- ☐ Medicaid Managed Care
- ☐ Medicaid Fee-for-Service
- ☐ Medicare
- ☐ Self Pay
- ☐ No Coverage
- ☐ Other: _____

28. **PHYSICIAN NAME, ADDRESS, TELEPHONE:**

29. **PERSON COMPLETING HIV REPORT:**

30. **DATE:**

31. **COMMENTS:**

TO REFER AN HIV-INFECTED CLIENT

FOR: ***HIV/AIDS Care Case Management Services***
KANSAS CITY: 816/513-6229; ST. LOUIS: 314/612-5188
Or the Missouri Department of Health (MDOH)
Section of STD/HIV/AIDS Prevention & Care Services
Jefferson City, MO - PH: 573/751-6439

FOR: ***Public Health Counseling and Intervention Services (Partner Notification OR Level II Client*)***
Kansas City: 816/513-6152; St. Louis: 314/612-5200
Your Local County or District Health Office, or the MDOH
Office of Surveillance, Jefferson City, MO - PH: 573/751-6148

TO OBTAIN ADDITIONAL INFORMATION:

- HIV CLINICAL CONSULTATION SERVICE: 1-800-933-3413
- OCCUPATIONAL EXPOSURE PROPHYLAXIS HOTLINE: 1-888-448-4911
- HIV/AIDS TREATMENT INFO. SERVICE: 1-800-HIV-0440
- NATIONAL AIDS HOTLINE: 1-800-342-AIDS
- MO HIV/STD HOTLINE: 1-800-533-AIDS
- KC HIV/AIDS HOTLINE: 816/ 513-6000

(*An HIV-infected person who **knowingly** continues to expose others to HIV)

Health Department Use Only: Type of Report: VY SD

Initial Source: _____ Report Source: _____

To Report Confirmed HIV/AIDS Infection (within 3 Days of Diagnosis) or Obtain Additional Report Forms, Contact the Missouri Department of Health or Appropriate City Health Department (Addresses Below)

SUBMIT REPORT TO:

Missouri Department of Health-OOS
930 Wildwood, P.O. Box 570
Jefferson City, MO 65102-0570
Tel: (573) 751-6463

Kansas City Health Department
Suite 2100, Surveillance Unit
2400 Troost Ave., Kansas City, MO 64108
Tel: (816) 513-6152

St. Louis Dept. of Health and Hospitals
Surveillance Unit / Room 436
634 No. Grand Blvd., St. Louis, MO 63103
Tel: (314) 612-5188

MO 580-1641 (7-00) SHP-22

I. STATE/LOCAL USE ONLY

Patient's Name: _____ Phone No.: ( ) _____
(Last, First, M.I.)

Address: _____ City: _____ County: _____ State: _____ Zip Code: _____

RETURN TO STATE/LOCAL HEALTH DEPARTMENT — *– Patient identifier information is not transmitted to CDC! –*

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention

ADULT HIV/AIDS CONFIDENTIAL CASE REPORT

(Patients ≥13 years of age at time of diagnosis)

CDC — CENTERS FOR DISEASE CONTROL AND PREVENTION

Form Approved OMB No. 0920-0009

II. HEALTH DEPARTMENT USE ONLY

DATE FORM COMPLETED: Mo. Day Yr. ☐☐ ☐☐ ☐☐

REPORT SOURCE: ☐☐

SOUNDEX CODE: ☐☐☐☐

REPORT STATUS: [1] New Report [2] Update

REPORTING HEALTH DEPARTMENT: State: _____ City/County: _____

State Patient No.: ☐☐☐☐☐☐☐☐☐☐

City/County Patient No.: ☐☐☐☐☐☐☐☐☐☐

III. DEMOGRAPHIC INFORMATION

DIAGNOSTIC STATUS AT REPORT (check one): [1] HIV Infection (not AIDS) [2] AIDS

AGE AT DIAGNOSIS: ☐☐ Years ☐☐ Years

DATE OF BIRTH: Mo. Day Yr. ☐☐ ☐☐ ☐☐

CURRENT STATUS: Alive [1] Dead [2] Unk. [9]

DATE OF DEATH: Mo. Day Yr. ☐☐ ☐☐ ☐☐

STATE/TERRITORY OF DEATH: _____

SEX: [1] Male [2] Female

RACE/ETHNICITY: [1] White (not Hispanic) [2] Black (not Hispanic) [3] Hispanic [4] Asian/Pacific Islander [5] American Indian/Alaska Native [9] Not Specified

COUNTRY OF BIRTH: [1] U.S. [7] U.S. Dependencies and Possessions (including Puerto Rico) (specify): _____ [8] Other (specify): _____ [9] Unknown

RESIDENCE AT DIAGNOSIS: City: _____ County: _____ State/Country: _____ Zip Code: ☐☐☐☐☐

IV. FACILITY OF DIAGNOSIS

Facility Name

City

State/Country

FACILITY SETTING (check one) [1] Public [2] Private [3] Federal [9] Unk.

FACILITY TYPE (check one) [01] Physician, HMO [31] Hospital, Inpatient [88] Other (specify): _____

This report to the Centers for Disease Control and Prevention (CDC) is authorized by law (Sections 304 and 306 of the Public Health Service Act, 42 USC 242b and 242k). Response in this case is voluntary for federal government purposes, but may be mandatory under state and local statutes. Your cooperation is necessary for the understanding and control of HIV/AIDS. Information in CDC's HIV/AIDS surveillance system that would permit identification of any individual on whom a record is maintained, is collected with a guarantee that it will be held in confidence, will be used only for the purposes stated in the assurance on file at the local health department, and will not otherwise be disclosed or released without the consent of the individual in accordance with Section 308(d) of the Public Health Service Act (42 USC 242m).

V. PATIENT HISTORY

AFTER 1977 AND PRECEDING THE FIRST POSITIVE HIV ANTIBODY TEST OR AIDS DIAGNOSIS, THIS PATIENT HAD (Respond to ALL Categories):

	Yes	No	Unk.
• Sex with male	1	0	9
• Sex with female	1	0	9
• Injected nonprescription drugs	1	0	9
• Received clotting factor for hemophilia/coagulation disorder	1	0	9
Specify disorder: [1] Factor VIII (Hemophilia A) [2] Factor IX (Hemophilia B) [8] Other (specify): _____			
• *HETEROSEXUAL* relations with any of the following:			
• Intravenous/injection drug user	1	0	9
• Bisexual male	1	0	9
• Person with hemophilia/coagulation disorder	1	0	9
• Transfusion recipient with documented HIV infection	1	0	9
• Transplant recipient with documented HIV infection	1	0	9
• Person with AIDS or documented HIV infection, risk not specified	1	0	9
• Received transfusion of blood/blood components (other than clotting factor)	1	0	9
First Mo. ☐☐ Yr. ☐☐ Last Mo. ☐☐ Yr. ☐☐			
• Received transplant of tissue/organs or artificial insemination	1	0	9
• Worked in a health-care or clinical laboratory setting	1	0	9
(specify occupation): _____			

VI. LABORATORY DATA

1. HIV ANTIBODY TESTS AT DIAGNOSIS: (Indicate first test)

	Pos	Neg	Ind	Not Done	TEST DATE Mo.	Yr.
• HIV–1 EIA	1	0	–	9	☐☐	☐☐
• HIV–1/HIV–2 combination EIA	1	0	–	9	☐☐	☐☐
• HIV–1 Western blot/IFA	1	0	8	9	☐☐	☐☐
• Other HIV antibody test (specify): _____	1	0	8	9	☐☐	☐☐

2. POSITIVE HIV DETECTION TEST: (Record earliest test) Mo. ☐☐ Yr. ☐☐

☐ culture ☐ antigen ☐ PCR, DNA or RNA probe

• Other (specify): _____ Mo. ☐☐ Yr. ☐☐

3. DETECTABLE VIRAL LOAD TEST: (Record most recent test)

Test type* ☐☐ COPIES/ML ☐,☐☐☐,☐☐☐ Mo. ☐☐ Yr. ☐☐

*Type: 11. NASBA (Organon) 12. RT-PCR (Roche) 13. bDNA(Chiron) 18. Other

• Date of last documented negative HIV test (specify type): _____ Mo. ☐☐ Yr. ☐☐

• If HIV laboratory tests were not documented, is HIV diagnosis documented by a physician? Yes [1] No [0] Unk. [9]

If yes, provide date of documentation by physician Mo. ☐☐ Yr. ☐☐

4. IMMUNOLOGIC LAB TESTS:

AT OR CLOSEST TO CURRENT DIAGNOSTIC STATUS

		Mo.	Yr.
• CD4 Count	☐,☐☐☐ cells/μL	☐☐	☐☐
• CD4 Percent	☐☐ %	☐☐	☐☐

First <200 μL or <14%

		Mo.	Yr.
• CD4 Count	☐,☐☐☐ cells/μL	☐☐	☐☐
• CD4 Percent	☐☐ %	☐☐	☐☐

VII. STATE/LOCAL USE ONLY

Physician's Name: (Last, First, M.I.) _____ Phone No.: ( ) _____ Medical Record No. _____

Hospital/Facility: _____ Person Completing Form: _____ Phone No.: ( ) _____

– Patient identifier information is not transmitted to CDC! –

VIII. CLINICAL STATUS

CLINICAL RECORD REVIEWED: Yes [1] No [0]

ENTER DATE PATIENT WAS DIAGNOSED AS: Asymptomatic (including acute retroviral syndrome and persistent generalized lymphadenopathy): Mo. Yr. Symptomatic (not AIDS): Mo. Yr.

AIDS INDICATOR DISEASES	Initial Diagnosis Def.	Initial Diagnosis Pres.	Initial Date Mo.	Initial Date Yr.
Candidiasis, bronchi, trachea, or lungs	1	NA		
Candidiasis, esophageal	1	2		
Carcinoma, invasive cervical	1	NA		
Coccidioidomycosis, disseminated or extrapulmonary	1	NA		
Cryptococcosis, extrapulmonary	1	NA		
Cryptosporidiosis, chronic intestinal (>1 mo. duration)	1	NA		
Cytomegalovirus disease (other than in liver, spleen, or nodes)	1	NA		
Cytomegalovirus retinitis (with loss of vision)	1	2		
HIV encephalopathy	1	NA		
Herpes simplex: chronic ulcer(s) (>1 mo. duration); or bronchitis, pneumonitis or esophagitis	1	NA		
Histoplasmosis, disseminated or extrapulmonary	1	NA		
Isosporiasis, chronic intestinal (>1 mo. duration)	1	NA		
Kaposi's sarcoma	1	2		

AIDS INDICATOR DISEASES	Initial Diagnosis Def.	Initial Diagnosis Pres.	Initial Date Mo.	Initial Date Yr.
Lymphoma, Burkitt's (or equivalent term)	1	NA		
Lymphoma, immunoblastic (or equivalent term)	1	NA		
Lymphoma, primary in brain	1	NA		
Mycobacterium avium complex or *M.kansasii*, disseminated or extrapulmonary	1	2		
M. tuberculosis, pulmonary*	1	2		
M. tuberculosis, disseminated or extrapulmonary*	1	2		
Mycobacterium, of other species or unidentified species, disseminated or extrapulmonary	1	2		
Pneumocystis carinii pneumonia	1	2		
Pneumonia, recurrent, in 12 mo. period	1	2		
Progressive multifocal leukoencephalopathy	1	NA		
Salmonella septicemia, recurrent	1	NA		
Toxoplasmosis of brain	1	2		
Wasting syndrome due to HIV	1	NA		

Def. = definitive diagnosis Pres. = presumptive diagnosis

* RVCT CASE NO.: _____

• **If HIV tests were not positive or were not done, does this patient have an immunodeficiency that would disqualify him/her from the AIDS case definition?** [1] Yes [0] No [9] Unknown

IX. TREATMENT/SERVICES REFERRALS

Has this patient been informed of his/her HIV infection? [1] Yes [0] No [9] Unk.

This patient's partners will be notified about their HIV exposure and counseled by:
[1] Health department [2] Physician/provider [3] Patient [9] Unknown

This patient is receiving or has been referred for:

	Yes	No	NA	Unk.
• HIV related medical services	1	0	–	9
• Substance abuse treatment services	1	0	8	9

This patient received or is receiving:

	Yes	No	Unk.
• Anti-retroviral therapy	1	0	9
• PCP prophylaxis	1	0	9

This patient has been enrolled at:

Clinical Trial	Clinic
1 NIH-sponsored	1 HRSA-sponsored
2 Other	2 Other
3 None	3 None
9 Unknown	9 Unknown

This patient's medical treatment is primarily reimbursed by:
[1] Medicaid [2] Private insurance/HMO [3] No coverage [4] Other Public Funding [7] Clinical trial/ government program [9] Unknown

FOR WOMEN:
- This patient is receiving or has been referred for gynecological or obstetrical services: [1] Yes [0] No [9] Unknown
- Is this patient currently pregnant? [1] Yes [0] No [9] Unknown
- Has this patient delivered live-born infants? [1] Yes (if delivered after 1977, provide birth information below for the most recent birth) [0] No [9] Unknown

CHILD'S DATE OF BIRTH: Mo. Day Yr.

Hospital of Birth: _____

City: _____ State: _____

Child's Soundex:

Child's State Patient No.

X. COMMENTS: _____

I. STATE/LOCAL USE ONLY

Patient's Name: (Last, First, M.I.) _____ Phone No.: ( ) _____

Address: _____ City: _____ County: _____ State: _____ Zip Code: _____

RETURN TO STATE/LOCAL HEALTH DEPARTMENT – *Patient identifier information is not transmitted to CDC!* –

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention

PEDIATRIC HIV/AIDS CONFIDENTIAL CASE REPORT

(Patients <13 years of age at time of diagnosis)

DATE FORM COMPLETED: Mo. Day Yr.

REPORT SOURCE:

II. HEALTH DEPARTMENT USE ONLY

Form Approved OMB No. 0920-0009

SOUNDEX CODE:

REPORT STATUS: 1 New Report 2 Update

REPORTING HEALTH DEPARTMENT: State: _____ City/County: _____

State Patient No.:

City/County Patient No.:

III. DEMOGRAPHIC INFORMATION

DIAGNOSTIC STATUS AT REPORT: (check one) 3 Perinatally HIV Exposed 4 Confirmed HIV Infection (not AIDS) 5 AIDS 6 Seroreverter

DATE OF LAST MEDICAL EVALUATION: Mo. Yr.

DATE OF BIRTH: Mo. Day Yr.

AGE AT DIAGNOSIS: Years Months — HIV Infection (not AIDS) ... AIDS .....

CURRENT STATUS: 1 Alive 2 Dead 9 Unk.

DATE OF DEATH: Mo. Day Yr.

STATE/TERRITORY OF DEATH:

DATE OF INITIAL EVALUATION FOR HIV INFECTION: Mo. Yr.

Was reason for initial HIV evaluation due to clinical signs and symptoms? Yes 1 No 0 Unk. 9

SEX: 1 Male 2 Female

RACE/ETHNICITY: 1 White (not Hispanic) 2 Black (not Hispanic) 3 Hispanic 4 Asian/Pacific Islander 5 American Indian/Alaska Native 9 Not specified

COUNTRY OF BIRTH: 1 U.S. 7 U.S. Dependencies and Possessions (including Puerto Rico) (specify): _____ 8 Other (specify): _____ 9 Unk.

RESIDENCE AT DIAGNOSIS: City: _____ County: _____ State/Country: _____ Zip Code:

IV. FACILITY OF DIAGNOSIS

Facility Name: _____ City: _____ State/Country: _____

FACILITY SETTING (check one) 1 Public 2 Private 3 Federal 9 Unk.

FACILITY TYPE (check one) 01 Physician, HMO 31 Hospital, Inpatient 88 Other (specify): _____

V. PATIENT/MATERNAL HISTORY *(Respond to ALL categories)*

• **Child's biologic mother's HIV Infection Status:** (check one)

1 Refused HIV testing 2 Known to be uninfected after this child's birth 9 HIV status unknown

Diagnosed with HIV Infection/AIDS:

3 Before this child's pregnancy 4 During this child's pregnancy 5 At time of delivery 6 Before child's birth, exact period unknown 7 After the child's birth 8 HIV-infected, unknown when diagnosed

• Date of mother's first positive HIV confirmatory test: ..... Mo. Yr.

• Mother was counseled about HIV testing during this pregnancy, labor or delivery? ..... Yes 1 No 0 Unk. 9

After 1977, this child's biologic mother had:	Yes	No	Unk.
• Injected nonprescription drugs	1	0	9
• *HETEROSEXUAL* relations with:			
- Intravenous/injection drug user	1	0	9
- Bisexual male	1	0	9
- Male with hemophilia/coagulation disorder	1	0	9
- Transfusion recipient with documented HIV infection	1	0	9
- Transplant recipient with documented HIV infection	1	0	9
- Male with AIDS or documented HIV infection, risk not specified	1	0	9
• Received transfusion of blood/blood components (other than clotting factor)	1	0	9
• Received transplant of tissue/organs or artificial insemination	1	0	9

Before the diagnosis of HIV Infection/AIDS, this child had:	Yes	No	Unk.
• Received clotting factor for hemophilia/coagulation disorder	1	0	9
(specify disorder): 1 Factor VIII (Hemophilia A) 2 Factor IX (Hemophilia B) 8 Other (specify): _____			
• Received transfusion of blood/blood components (other than clotting factor)	1	0	9
First: Mo. Yr. Last: Mo. Yr.			
• Received transplant of tissue/organs	1	0	9
• Sexual contact with a male	1	0	9
• Sexual contact with a female	1	0	9
• Injected nonprescription drugs	1	0	9
• Other (Alert State/City NIR Coordinator)	1	0	9

VI. STATE/LOCAL USE ONLY

Physician's Name: _____ Phone No.: ( ) _____ Medical Record No. _____
(Last, First, M.I.)

Hospital/Facility: _____ Person Completing Form: _____ Phone No.: ( ) _____

– Physician identifier information is not transmitted to CDC! –

VII. LABORATORY DATA

1. HIV ANTIBODY TESTS AT DIAGNOSIS: (Record all tests, include earliest positive)

	Positive	Negative	Indeterminate	Not Done	TEST DATE Mo.	TEST DATE Yr.
• HIV–1 EIA	1	0	–	9		
• HIV–1 EIA	1	0	–	9		
• HIV–1/HIV–2 combination EIA	1	0	–	9		
• HIV–1/HIV–2 combination EIA	1	0	–	9		
• HIV–1 Western blot/IFA	1	0	8	9		
• HIV–1 Western blot/IFA	1	0	8	9		
• Other HIV antibody test (specify): _____	1	0	8	9		

2. HIV DETECTION TESTS:
(Record all tests, include earliest positive)

	Positive	Negative	Not Done	TEST DATE Mo.	TEST DATE Yr.
• HIV culture	1	0	9		
• HIV culture	1	0	9		
• HIV antigen test	1	0	9		
• HIV antigen test	1	0	9		

	Positive	Negative	Not Done	TEST DATE Mo.	TEST DATE Yr.
• HIV DNA PCR	1	0	9		
• HIV DNA PCR	1	0	9		
• HIV RNA PCR	1	0	9		
• HIV RNA PCR	1	0	9		
• Other, specify _____	1	0	9		

3. HIV VIRAL LOAD TEST: (Record all tests, include earliest detectable)

*Type: 11. NASBA (Organon) 12. RT-PCR (Roche) 13. bDNA(Chiron) 18. Other

Test type*	Detectable Yes	Detectable No	Copies/ml	Test Date Mo.	Test Date Yr.
	1	0			
	1	0			

4. IMMUNOLOGIC LAB TESTS: (At or closest to current diagnostic status)

	Mo.	Yr.
• CD4 Count _____ , _____ cells/µL		
• CD4 Count _____ , _____ cells/µL		
• CD4 Percent _____ %		
• CD4 Percent _____ %		

5. If HIV tests were not positive or were not done, or the patient is less than 18 months of age, does this patient have an immunodeficiency that would disqualify him/her from the AIDS case definition? ..... Yes 1 No 0 Unk. 9

6. If laboratory tests were not documented, is patient confirmed by a physician as:

	Yes	No	Unk.	Date of Documentation Mo.	Date of Documentation Yr.
• HIV-infected	1	0	9		
• Not HIV-infected	1	0	9		

VIII. CLINICAL STATUS

AIDS INDICATOR DISEASES	Initial Diagnosis Def.	Initial Diagnosis Pres.	Initial Date Mo.	Initial Date Yr.
Bacterial infections, multiple or recurrent (including Salmonella septicemia)	1	NA		
Candidiasis, bronchi, trachea, or lungs	1	NA		
Candidiasis, esophageal	1	2		
Coccidioidomycosis, disseminated or extrapulmonary	1	NA		
Cryptococcosis, extrapulmonary	1	NA		
Cryptosporidiosis, chronic intestinal (>1 mo. duration)	1	NA		
Cytomegalovirus disease (other than in liver, spleen, or nodes) onset at >1 mo. of age	1	NA		
Cytomegalovirus retinitis (with loss of vision)	1	2		
HIV encephalopathy	1	NA		
Herpes simplex: chronic ulcer(s) (>1 mo. duration); or bronchitis, pneumonitis or esophagitis, onset at >1 mo. of age	1	NA		
Histoplasmosis, disseminated or extrapulmonary	1	NA		
Isosporiasis, chronic intestinal (>1 mo. duration)	1	NA		

AIDS INDICATOR DISEASES	Initial Diagnosis Def.	Initial Diagnosis Pres.	Initial Date Mo.	Initial Date Yr.
Kaposi's sarcoma	1	2		
Lymphoid interstitial pneumonia and/or pulmonary lymphoid hyperplasia	1	2		
Lymphoma, Burkitt's (or equivalent term)	1	NA		
Lymphoma, immunoblastic (or equivalent term)	1	NA		
Lymphoma, primary in brain	1	NA		
Mycobacterium avium complex or *M.kansasii*, disseminated or extrapulmonary	1	2		
M. tuberculosis, disseminated or extrapulmonary*	1	2		
Mycobacterium, of other species or unidentified species, disseminated or extrapulmonary	1	2		
Pneumocystis carinii pneumonia	1	2		
Progressive multifocal leukoencephalopathy	1	NA		
Toxoplasmosis of brain, onset at >1 mo. of age	1	2		
Wasting syndrome due to HIV	1	NA		

Def. = definitive diagnosis Pres. = presumptive diagnosis

Has this child been diagnosed with pulmonary tuberculosis?* 1 Yes 0 No 9 Unk. If yes, initial diagnosis and date: 1 Definitive 2 Presumptive Mo. Yr. *RVCT CASE NO.:

IX. BIRTH HISTORY (for PERINATAL cases only)

Birth history was available for this child: [1] Yes [0] No [9] Unk. *If No or Unknown, proceed to Section X.*

HOSPITAL AT BIRTH:

Hospital: _____ City: _____ State: _____ Country: _____

RESIDENCE AT BIRTH:

City: _____ County: _____ State/ Country: _____ Zip Code: _____

BIRTHWEIGHT: (enter lbs/oz OR grams)

_____ lbs. _____ oz

_____ grams

BIRTH: **Type:** .... [1] Single [2] Twin [3] >2 [9] Unk.

Delivery: ..... [1] Vaginal [2] Elective Caesarean [3] Non-elective Caesarean [4] Caesarean, unk. type [9] Unk.

Birth Defects: .... [1] Yes [0] No [9] Unk.

Specify type(s): _____ **Code:** _____ . _____

NEONATAL STATUS:

[1] Full term

[2] Premature

Weeks _____ 99 = Unk.

PRENATAL CARE:

Month of pregnancy prenatal care began: _____ mos. 99 = Unk. 00 = None

Total number of prenatal care visits: _____ 99 = Unk. 00 = None

- **Did mother receive zidovudine (ZDV, AZT) during pregnancy?** Refused [8] Yes [1] No [0] Unk. [9]
- **Did mother receive zidovudine (ZDV, AZT) during labor/delivery?** Refused [8] Yes [1] No [0] Unk. [9]
- **If yes, what week of pregnancy was zidovudine (ZDV, AZT) started?** Weeks: _____ 99 = Unk.
- **Did mother receive zidovudine (ZDV, AZT) prior to this pregnancy?** Yes [1] No [0] Unk. [9]
- **Did mother receive any other Anti-retroviral medication during pregnancy?** Yes [1] No [0] Unk. [9]

  If yes, specify: _____
- **Did mother receive any other Anti-retroviral medication during labor/delivery?** Yes [1] No [0] Unk. [9]

  If yes, specify: _____

Maternal Date of Birth Mo. Day Yr.

Maternal Soundex: _____

Maternal State Patient No.

Birthplace of Biologic Mother:

[1] U.S. [7] U.S. Dependencies and Possessions (including Puerto Rico) (specify): _____

[8] Other (specify): _____ [9] Unk.

X. TREATMENT/SERVICES REFERRALS

This child received or is receiving:

	Yes	No	Unk.	DATE STARTED Mo. Day Yr.
• Neonatal zidovudine (ZDV, AZT) for HIV *prevention*	[1]	[0]	[9]	
• Other neonatal anti-retroviral medication for HIV *prevention*	[1]	[0]	[9]	
• Anti-retroviral therapy for HIV *treatment*	[1]	[0]	[9]	
• PCP prophylaxis	[1]	[0]	[9]	

If yes, specify: _____

Was child breastfed? Yes [1] No [0] Unk. [9]

This child has been enrolled at:

Clinical Trial: [1] NIH-sponsored [2] Other [3] None [9] Unk.

Clinic: [1] HRSA-sponsored [2] Other [3] None [9] Unk.

This child's medical treatment is primarily reimbursed by:

[1] Medicaid [4] Other Public Funding

[2] Private insurance/HMO [7] Clinical trial/government program

[3] No coverage [9] Unk.

This child's primary caretaker is:

[1] Biologic parent(s) [2] Other relative [3] Foster/Adoptive parent, relative [4] Foster/Adoptive parent, unrelated [7] Social service agency [8] Other (specify in Section XI.) [9] Unk.

XI. COMMENTS:

(XI. COMMENTS CONTINUED ON THE BACK)

XI. COMMENTS (continued)